

# Author Index to Volume 51

- Adcock, W., Brunger, M. J.,  
Michalewicz, M. T., and  
Winkler, D. A.—  
Application of DFT and EMS to the  
study of strained organic molecules 707
- Agop, M., Griga, V., Buzea, C. Gh.,  
Petreus, I., Buzea, C., Marin, C., and  
Rezlescu, N.—  
Some physical implications of the  
gravitomagnetic field in the fractal  
space-time theory 9
- Agop, M., Griga, V., Buzea, C. Gh.,  
Rezlescu, N., Buzea, C., Zacharias, A.,  
and Petreus, I.—  
Structure of the world crystal 21
- Al-Ohali, M.—  
See Nagadi, M. M. 913  
Naqvi, A. A. 903
- Amos, K., and Bennett, M. T.—  
A nonlocal potential form for *s*-wave  
 $\alpha$ - $\alpha$  scattering 47
- Andernach, H.—  
See Slee, O. B. 971
- Arons, R. R.—  
See Osthover, C. 379
- Badurek, G.—  
See Leeb, H. 401
- Baron, A. Q. R.—  
See Grunsteudel, H. F. 453
- Beck, E., Brewer, W. D., Funk, T., and  
Klein, E.—  
Nuclear spin-lattice relaxation rates of  
Ni and Ru in Fe 267
- Beck, E., Brewer, W. D., Funk, T., Bobek,  
C., and Klein, E.—  
Spin-lattice relaxation rates of Os and  
other 5d elements in Fe 281
- Bennett, M. T.—  
See Amos, K. 47
- Bezakova, E.—  
See Stuchbery, A. E. 183
- Birke, M.—  
See Litterst, F. J. 385
- Bobek, C.—  
See Beck, E. 281
- Bogner, J., Schachner, H., Reissner, M.,  
and Steiner, W.—  
Magnetic correlations in spin glasses  
above the freezing temperature  
investigated by high field Mossbauer  
spectroscopy 349
- Bowden, G. J.—  
A review of the low temperature  
properties of the rare earth vanadates  
201
- Bray, I.—  
See Kheifets, A. S. 655
- Brewer, W. D.—  
See Beck, E. 267, 281  
Riegel, D. 157
- Brunger, M. J.—  
Foreword to special issue on Electron  
Momentum Spectroscopy Studies  
on Atoms, Molecules and Solids:  
Past Achievements and Future  
Directions 591  
See Adcock, W. 707  
Nicholson, R. F. J. 691
- Buchelt, R. J.—  
See Leeb, H. 401
- Buchner, B.—  
See Litterst, F. J. 385
- Bulte, D. P.—  
See Jarvis, P. D. 891
- Burak, Ya.—  
See Kityk, A. V. 943
- Burman, R. R.—  
Quasi-dipole magnetic fields 959
- Buti, B.—  
See Roy Chowdhury, A. 125
- Buzea, C.—  
See Agop, M. 9, 21
- Buzea, C. Gh.—  
See Agop, M. 9, 21
- Cahill, R. T., and Gunner, S. M.—  
The pion mass formula 509
- Cashion, J. D., and Shannon, S. R.—  
Evaluation of exchange and anisotropy  
constants of molecular species from  
high field Mossbauer spectra. 363
- Caspary, E.-G.—  
See Stepankova, H. 437
- Cavanagh, S. J.—  
See Lohmann, B. 679
- Chaplin, D. H.—  
See Hutchison, W. D. 295
- Chaplin, D. H., Hutchison, W. D., and  
Stewart, G. A.—  
Foreword to special issue on Nuclear  
Methods in Magnetism 153
- Chen, X. J.—  
Progress of electron momentum  
spectroscopy in China 619
- Chumakov, A. I.—  
See Grunsteudel, H. F. 453
- Dasgupta, B.—  
See Roy Chowdhury, A. 125
- Dawe, R. L., and Hines, K. C.—  
The physics of tachyons. IV. Tachyon  
electrodynamics 477

- Denisova, A. S.—  
     *See* Komissarova, B. A. 175
- Dettman, C. P.—  
     *See* Micolich, A. P. 547
- Dixon, A.—  
     New developments in optical microscopy  
     for biological applications 729
- Duguet, A.—  
     *See* Lohmann, B. 679
- Englich, J.—  
     *See* Stepankova, H. 437
- Erofeev, V. I.—  
     Weak plasma turbulence theory and  
     some other items of plasma kinetics  
     843
- Ford, M. J.—  
     Studies of the electron-impact  
     double-ionisation process in  
     magnesium using coincidence  
     techniques 665
- Fomicheva, L. N.—  
     *See* Komissarova, B. A. 175
- Fromhold, T. M.—  
     *See* Micolich, A. P. 547
- Funk, T.—  
     *See* Beck, E. 267, 281
- Geurdes, J. F.—  
     Wigner's variant of Bell's inequality 835
- Green, H. S.—  
     Quantum theory of gravitation 459
- Griga, V.—  
     *See* Agop, M. 9, 21
- Grunsteudel, H.—  
     *See* Grunsteudel, H. F. 453
- Grunsteudel, H. F., Hesse, H.-J., Ruffer,  
     R., Wortmann, G., Chumakov, A. I.,  
     Baron, A. Q. R., Grunsteudel, H.,  
     Leupold, O., and Metge, J.—  
     Spatial distribution of magnetic and  
     nonmagnetic phases in nuclear  
     forward scattering of synchrotron  
     radiation 453
- Gubbens, P. C. M., and Mulders, A. M.—  
     Magnetic behaviour of systems with a  
     quasi-doublet ground state 315
- Gunner, S. M.—  
     *See* Cahill, R. T. 509
- Haynes, M. A.—  
     *See* Lohmann, B. 679
- Hesse, H.-J.—  
     *See* Grunsteudel, H. F. 453
- Hillberg, M.—  
     *See* Litterst, F. J. 385
- Hines, K. C.—  
     *See* Dawe, R. L. 477
- Hochhold, M.—  
     *See* Leeb, H. 401
- Hollenberg, L. C. L.—  
     *See* Wilson, M. P. 35
- Howard, C. J.—  
     *See* Hunter, B. A. 539
- Hughes, J. M., and von Nagy-Felsobuki,  
     E. I.—  
     Ab initio investigations of the electronic  
     structure of  $\text{HeNH}^+$  and  $\text{HeNH}^{2+}$  57
- Hugrass, W. N.—  
     Effect of the motion of ions on the  
     penetration of a rotating magnetic  
     field into a plasma cylinder 859
- Hunter, B. A., Howard, C. J., and Kim,  
     D.-J.—  
     Neutron diffraction study of tetragonal  
     zirconias containing tetravalent  
     dopants 539
- Hutchison, W. D.—  
     *See* Chaplin, D. H. 153
- Hutchison, W. D., Yazidjoglou, N., and  
     Chaplin, D. H.—  
     MAPON spectroscopy and its application  
     to transition metal ferromagnets 295
- Jarvis, P. D., and Bulte, D. P.—  
     Tunnelling of a molecule 891
- Jiang, J.—  
     Magnetic transition and spin correlation  
     in Mn oxides at low temperatures 131
- Joshi, M. P., and Khadekar, G. S.—  
     Higher dimensional exact solutions of  
     Einstein's field equations for a massive  
     point-particle with scalar point  
     charge 577
- Kessler, J.—  
     Electron dichroism: Interaction of  
     spin-polarised electrons with chiral  
     molecules 645
- Khadekar, G. S.—  
     *See* Joshi, M. P. 577
- Kheifets, A. S., and Bray, I.—  
     Helium double photoionisation: An  
     accurate solution of a three-body  
     Coulomb problem 655
- Khiari, F. Z.—  
     *See* Nagadi, M. M. 913
- Naqvi, A. A. 903
- Kidwai, S.—  
     *See* Nagadi, M. M. 913
- Naqvi, A. A. 903
- Kim, D.-J.—  
     *See* Hunter, B. A. 539

- Kityk, A. V., Zadorozhna, A. V., Shchur, Ya. I., Martynyuk-Lototska, I. Yu., Burak, Ya., and Vlokh, O. G.—  
Elastic properties of  $\text{Cs}_2\text{HgBr}_4$  and  $\text{Cs}_2\text{CdBr}_4$  crystals 943
- Klauss, H.-H.—  
See Litterst, F. J. 385
- Klein, E.—  
See Beck, E. 267, 281
- Kohout, J.—  
See Stepankova, H. 437
- Komissarova, B. A., Rysany, G. K., Shpinkova, L. G., Sorokin, A. A., Tsvyashchenko, A. V., Fomicheva, L. N., and Denisova, A. S.—  
Hyperfine field and induced moment of  $^{181}\text{Ta}$  in the rare earth-iron Laves compounds 175
- Kopmann, W.—  
See Litterst, F. J. 385
- Lahmam-Bennani, A.—  
See Lohmann, B. 679
- Leeb, H., Hochhold, M., Badurek, G., Buchelt, R. J., and Schrick, A.—  
Neutron magnetic tomography: A feasibility study 401
- Leupold, O.—  
See Grunsteudel, H. F. 453
- Lewandowski, J. L. V.—  
Ion confinement in a toroidal heliac 67  
Tokamak equilibrium model with finite toroidicity effects 81
- Litterst, F. J., Birke, M., Buchner, B., Hillberg, M., Klauss, H.-H., Kopmann, W., Micklitz, H., and Wagener, W.—  
Examples of the application of muon spin relaxation to studies of magnetism in cuprates 385
- Lohmann, B., Cavanagh, S. J., Haynes, M. A., Taouil, I., Duguet, A., and Lahmam-Bennani, A.—  
Investigating inner shell ionisation via the (e, 2e) technique 679
- Lutgemeier, H.—  
See Stepankova, H. 437
- McCarthy, I. E.—  
The development of electron momentum spectroscopy 593  
See Nicholson, R. F. J. 691
- Marin, C.—  
See Agop, M. 9
- Martynyuk-Lototska, I. Yu.—  
See Kityk, A. V. 943
- Metge, J.—  
See Grunsteudel, H. F. 453
- Michalewicz, M. T.—  
See Adcock, W. 707
- Micklitz, H.—  
See Litterst, F. J. 385
- Micolich, A. P., Taylor, R. P., Newbury, R., Dettman, C. P., and Fromhold, T. M.—  
Experimental and theoretical investigations of electron dynamics in a semiconductor Sinai billiard 547
- Milburn, G. J.—  
An atom-optical Maxwell demon 1
- Mohan, M.—  
See Prasad, V. 527
- Mondal, K. K., Paul, S. N., and Roy Chowdhury, A.—  
Effects of boundary and electron inertia on the ion-acoustic wave in a plasma: A pseudopotential approach 113
- Mukherjee, J., and Roy Chowdhury, A.—  
Stability of shear kinetic Alfvén waves in a hot relativistic plasma 921
- Mulders, A. M.—  
See Gubbens, P. C. M. 315
- Nagadi, M. M.—  
See Naqvi, A. A. 903
- Nagadi, M. M., Naqvi, A. A., Kidwai, S., Al-Ohali, M. A., and Khiari, F. Z.—  
Deuteron stripping cross section from  $^{13}\text{C}$  at deuteron energies below 350 keV 913
- Naqvi, A. A., Nagadi, M. M., Kidwai, S., Al-Ohali, M. A., and Khiari, F. Z.—  
Cross section measurements of two-nucleon pickup reactions in the  $^{13}\text{C}+d$  system at deuteron energies below 350 keV 903
- Naqvi, A. A.—  
See Nagadi, M. M. 913
- Nejoh, Y. N.—  
Effects of the dust charge fluctuation and ion temperature on large amplitude ion-acoustic waves in a dusty plasma 95
- Newbury, R.—  
See Micolich, A. P. 547
- Nicholson, R. F., McCarthy, I. E., and Brunger, M. J.—  
A procedure to determine Dyson orbitals from electron momentum spectroscopy: Application to 1,2-propadiene, 1,3-butadiene, cyclopropane and [1.1.1]propellane 691
- Nishimura, K.—  
Nuclear orientation on rare earth nickel alloys 237

- Novak, P.—  
See Stepankova, H. 437
- Ogwo, N.—  
See Ubachukwu, A. A. 143
- Osthover, C., Sauer, C., and Arons, R. R.—  
<sup>57</sup>Fe Mossbauer experiments of doped (La<sub>0.67</sub>Ba<sub>0.33</sub>)(Mn<sub>0.9</sub>Fe<sub>0.1</sub>)O<sub>3</sub> 379
- Paul, S. N.—  
See Mondal, K. K. 113
- Petreus, I.—  
See Agop, M. 9, 21
- Prasad, V., Sharma, R., and Mohan, M.—  
Excitation dynamics of an atom due to heavy ion impact in a laser field 527
- Reissner, M.—  
See Bogner, J. 349
- Reynhardt, E. C.—  
Phase transitions and molecular reorientations in bilayered n-heptadecylammonium chloride 557
- Rezlescu, N.—  
See Agop, M. 9, 21
- Riegel, D., and Brewer, W. D.—  
Magnetic behaviour of implanted transition metal probes at different lattice sites in metals 157
- Rotter, M.—  
See Trhlik, M. 255
- Roy, A. L.—  
See Slee, O. B. 971
- Roy Chowdhury, A.—  
See Mondal, K. K. 113  
Mukherjee, J. 921  
Roy Chowdhury, K. 935
- Roy Chowdhury, A., Buti, B., and Dasgupta, B.—  
Large amplitude Alfvén soliton in the solar wind and Painlevé analysis 125
- Roy Chowdhury, K., and Roy Chowdhury, A.—  
Effect of non-thermal electrons on the shock wave in a magnetised plasma 935
- Ruffer, R.—  
See Grunsteudel, H. F. 453
- Ryasny, G. K.—  
See Komissarova, B. A. 175
- Sauer, C.—  
See Osthover, C. 379
- Schachner, H.—  
See Bogner, J. 349
- Schricker, A.—  
See Leeb, H. 401
- Severijns, N.—  
See Trhlik, M. 255
- Shakhmurov, R. N.—  
Influence of giant nuclear-spin polarisation on resonant gamma-ray absorption and emission 339
- Shakhmurova, L. N.—  
Nuclear spin-system dynamics affected by double inhomogeneity under multipulse excitation in statistical tensor formalism 415
- Shannon, S. R.—  
See Cashion, J. D. 363
- Sharma, R.—  
See Prasad, V. 527
- Shchur, Ya. I.—  
See Kityk, A. V. 943
- Shpinkova, L. G.—  
See Komissarova, B. A. 175
- Slee, O. B., Roy, A. L., Andernach, H.—  
A VLA survey of rich clusters of galaxies. IV. An analysis of the results 971
- Sorokin, A. A.—  
See Komissarova, B. A. 175
- Steiner, W.—  
See Bogner, J. 349
- Stepankova, H., Kohout, J., Novak, P., English, J., Caspary, E.-G., and Lutgemeier, H.—  
Dependence of <sup>57</sup>Fe hyperfine field in yttrium iron garnet on ionic radius of diamagnetic defects: NMR study 437
- Stewart, G.—  
See Chaplin, D. H. 153
- Stuchbery, A. E., and Bezakova, E.—  
Hyperfine magnetic fields for Os, Ir and Pt in iron: pre-equilibrium effects, domain rotation and the Aharoni effect 183
- Taouil, I.—  
See Lohmann, B. 679
- Taylor, R. P.—  
See Micolich, A. P. 547
- Trhlik, M., Rotter, M., Severijns, N., and Vanneste, L.—  
Nuclear orientation as a tool for investigation of magnetic multilayers with rare earths 255
- Tsvyashchenko, A. V.—  
See Komissarova, B. A. 175
- Tsytoich, V. N.—  
One-dimensional self-organised structures in dusty plasmas 763

- Ubachukwu, A. A.—  
 Implications of a nonzero cosmological  
 constant and luminosity selection  
 effects on cosmological tests 585
- Ubachukwu, A. A., and Ogwo, N.—  
 Luminosity selection effects and linear  
 size evolution in the quasar/galaxy  
 unification scheme 143
- Vanneste, L.—  
 See Trhlik, M. 255
- Vlokh, O. G.—  
 See Kityk, A. V. 943
- von Nagy-Felsobuki, E. I.—  
 See Hughes, J. M. 57
- Vos, M.—  
 Recent developments in electron  
 momentum spectroscopy of solids 609
- Wagener, W.—  
 See Litterst, F. J. 385
- Weigold, E.—  
 Future directions in electron momentum  
 spectroscopy of matter 751
- Williams, J. F.—  
 New and old measurements of electron  
 scattering in atomic hydrogen 633
- Wilson, M. P., and Hollenberg, L. C. L.—  
 Glueball spectrum of SU(3) lattice gauge  
 theory by plaquette expansion 35
- Winkler, D. A.—  
 See Adcock, W. 707
- Wortmann, G.—  
 See Grunsteudel, H. F. 453
- Yano, J.-I.—  
 Planetary-scale coherent structures of  
 tropical moist convection 865  
 Deep convection in the interior of major  
 planets: A review 875
- Yazidjoglou, N.—  
 See Hutchison, W. D. 295
- Zacharias, A.—  
 See Agop, M. 21
- Zadorozhna, A. V.—  
 See Kityk, A. V. 943